

Appln. No.: 10/005,789
Amendment dated April 27, 2004
Reply to Final Office Action mailed March 3, 2004

Listing of Claims:

1. **(Previously Amended)** A system for creating and maintaining a microenvironment in a living body, the system comprising:

an implantable infusion device for delivering a medicament composition to a target site in the living body through a catheter, the infusion device having a reservoir, the medicament composition contained in the reservoir for providing a therapeutic benefit to the target site, the medicament composition including living cells and being specifically tailored to provide a comprehensive microenvironment at a target site in the living body.

2. **(Original)** The system of claim 1 wherein the infusion device comprises an implantable infusion pump.

3. **(Canceled)** The system of claim 2, wherein the medicament composition includes living cells.

4. **(Previously Amended)** The system of claim 1, wherein the medicament composition includes one or more neurotropic factors.

5. **(Previously Amended)** The system of claim 1, wherein the medicament composition includes stem cells that may be later modified to produce an exogenous substance.

6. **(Original)** The system of claim 5, wherein the exogenous substance is selected from the group consisting of enzymes, co-factors, neurotransmitters and trophins.

7. **(Previously Amended)** The system of claim 1, wherein the reservoir contains a cell maintainer adaptive to maintain the cells in a dormant state.

8. **(Withdrawn)** A method of treating a patient comprising the steps of:

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implanting an infusion system in the patient, the infusion system including a reservoir for containing a first medicament composition;

operating the infusion system to deliver the first medicament composition to a target site to thereby create a microenvironment in the target site in the patient's body; and

infusing a second medicament composition to foster the development of cells which produce exogenous substances at the target site.

9. **(Withdrawn)** The method of claim 8, wherein the step of operating the infusion system further comprises the step of delivering living cells to the target site.

10. **(Withdrawn)** The method of claim 9, wherein the step of operating the infusion system further comprises the step of utilizing native cell structures at the target site as a framework on which the living cells grow.

11. **(Withdrawn)** The method of claim 10, wherein the living cells produce exogenous substances once delivered to the target area.

12. **(Withdrawn)** The method of claim 8 wherein the first medicament composition is selected from the group consisting of stem cells, neurotrophic factors, proteins, nerve growth factors, genetically modified cells, enzymes, co-factors, neurotransmitters, trophins, and adhesive peptides.

13. **(Withdrawn)** A method of creating or maintaining a microenvironment in a living body comprising the steps of:

implanting an infusion device in the living body, the infusion device having a reservoir containing a medicament composition selected from the group consisting of stem cells, neurotrophic factors, proteins, nerve growth factors, genetically modified cells, enzymes, co-factors, neurotransmitters, trophins, and adhesive peptides;

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delivering, via the infusion device, the medicament composition to a target area of the living body to create or maintain a microenvironment in the target area.

14. **(Withdrawn)** A method of creating or maintaining a microenvironment in a living body comprising the steps of:

implanting an infusion device in the living body, the infusion device having a reservoir containing a medicament composition selected from the group consisting of stem cells, neurotrophic factors, proteins, nerve growth factors, genetically modified cells, enzymes, co-factors, neurotransmitters, trophins, and adhesive peptides;

delivering, via the infusion device, the medicament composition to a target area of the living body to create or maintain a microenvironment in the target area, and
infusing an exogenous substance to foster the growth of cells at the target area.

15. **(Withdrawn)** A method of treating a patient whose nervous system has been traumatized, the method comprising the steps of:

implanting an infusion system in the patient's body;

operating the infusion system to create and maintain a microenvironment in a target site in the patient's body to foster the regeneration of the patient's nervous system.

16. **(Withdrawn)** The method of claim 15, wherein the step of operating the infusion system further comprises the step of delivering a medicament composition including living cells to the target site.

17. **(Withdrawn)** The method of claim 15, wherein the step of operating the infusion system further comprises the step of delivering the living cells to a gap in the nerve structure.

18. **(Previously Presented)** The system of claim 7, wherein the cell maintainer comprises a coating on the interior of the reservoir.

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19. **(Previously Presented)** The system of claim 7, wherein the cell maintainer comprises vitamin A derivative retinoic acid.

20. **(Previously Presented)** The system of claim 1, further comprising a second medicament composition contained within the reservoir configured to foster the development of cells which produce exogenous substances at the target site.

21. **(Previously Presented)** The system of claim 1, further comprising a second medicament composition contained within the reservoir configured to use native cell structures at the target site as a framework on which to grow living cells.

22. **(Previously Presented)** The system of claim 1, wherein the medicament composition is configured to use the native cell structures at the target site as a framework on which to grow living cells.

23. **(Previously Presented)** The system of claim 1, wherein the medicament composition is configured to foster the development of cells which produce exogenous substances at the target site.